

# Notice of Allowability

Application No.

10/805,493

Examiner

Ismael Negron

Applicant(s)

CHO ET AL.

Art Unit

2885

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Request for Continued Examination (RCE) filed January 3, 2007.
2. ☒ The allowed claim(s) is/are 1,3-5 and 7-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

### ***Response to Amendment***

2. Applicant's amendment filed on January 3, 2007 has been entered. Claims 1 and 5 have been amended. Claims 2 and 6 have been cancelled. No claim has been added. Claims 1, 3-5 and 7-20 are still pending in this application, with claims 1, 5 and 13 being independent.

### **Examiner's Amendment**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

4. Authorization for this examiner's amendment was given in a telephone interview with Christopher Lipp (Reg. No. 41,157) on February 12, 2007.

5. The application has been amended as follows:

CLAIM 12. The projection system of claim 6 5, wherein the illumination system further comprises a polarization conversion system which is disposed on a light path between the first cylinder lens and the relay lens; and converts incident light into light having a single polarization.

***Allowable Subject Matter***

6. Claims 1, 3-5 and 7-20 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Applicant teaches an illumination system including a light source, first and second cylindrical lens arrays, a relay lens, a first cylinder lens disposed between the light source and the first cylindrical lens array, and a second cylinder lens disposed between the first and second cylindrical lens arrays, or behind the second cylindrical lens array. The first and second cylindrical lens arrays each include a plurality of cylindrical lens cells, the cells of the first cylindrical lens array dividing light from the light source into a plurality of light beams, while the cells of the second cylindrical lens array combine the plurality of light beams in a same direction. The first cylinder lens

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converges light emitted by the light source, and the second cylinder lens collimates the incident light. The relay lens relays the light beams combined by the second cylindrical lens array so that a majority concentrates on an incident light axis to have a Gaussian distribution.

**Hashimoto** (U.S. Pat. App. Pub. 2002/0024740) discloses an illumination system meeting all the structural limitations of the claims, however, it produces a uniform light distribution, not a Gaussian distribution as claimed.

No prior art was found teaching individually, or suggesting in combination, all of the features of the applicants' invention, specifically the relay lens relaying light beams to achieve a Gaussian light distribution, in combination with the recited structural limitations of the illumination system.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee, can be reached on (571) 272-7044. The facsimile machine number for the Art Group is (571) 273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.



JONG-SUK (JAMES) LEE  
SUPERVISORY PATENT EXAMINER



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